AGENDA ITEM 8

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Memorandum

TO: Advisory Council DATE: June 4, 2008

FR: Lisa Klein W. I.

RE: Transportation 2035: Project Performance Assessment – Draft Results

Last year, the Commission agreed to pursue a performance-based approach to the Transportation 2035 Plan. Earlier this year, the Planning Committee approved a project-level performance assessment of investments under consideration for inclusion in the Plan. This memo presents the results of the performance assessment.

The assessment consists of both a qualitative policy assessment and a quantitative performance evaluation and builds on the policy foundation for the Plan as described below and in the attached power point slides. The assessment applied to all potential investments except those considered "committed" by Commission policy. (See Attachment A.)

1. **Quantitative project performance evaluation**: MTC staff quantitatively evaluated a subset of approximately 75 mostly higher cost projects. The performance criteria stem from the Transportation 2035 Performance Objectives approved by the Commission earlier this year. (See Attachment B for the Performance Objectives and associated performance measures.) Benefits captured in the quantitative analysis include reductions in delay, vehicle miles of travel, emissions and collisions. MTC also estimated – as a trial measure – cost per low-income household served for transit projects.

   The regional travel demand model was used to estimate the benefits for most projects in the quantitative evaluation. MTC also evaluated regional funding programs (e.g., Transportation for Livable Communities, Regional Bicycle Network, Lifeline, Climate Protection Program and transit and roadway maintenance). The evaluation of these projects is based on current research from a number of sources.

2. **Qualitative project-level policy assessment**: MTC staff evaluated approximately 20 project types representing the range of more than 700 candidate projects for discretionary funding submitted through the Transportation 2035 Call For Projects. The assessment considered the degree to which each project type supports the Transportation 2035 Vision Policy Strategies, approved by the Commission earlier this year. This information was then used map the project types to the RTP goal groupings that we expect to frame the investment trade-off discussions over the next few months.

The analysis results are summarized in the attached slides and data tables:

- Attachment C: Slides summarizing analysis and results
- Table 1: Quantitative Evaluation Summary, projects ranked by benefit/cost ratio
- Table 2: Quantitative Assessment of Regional Funding Programs

I look forward to discussing the results at your June 11 meeting.

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Attachment A: Quantitative Evaluation Approach

The approach is to compare project costs and benefits in order to identify the most cost-effective projects with respect to the Transportation 2035 Performance Objectives. Key aspects of the proposed approach include:

- Quantitative comparison of project costs and benefits: As possible, benefits are valued monetarily based on established economic research. This approach is similar to that used for the Corridor Mobility Improvement Account program in the State Infrastructure Bond.
- Benefits related directly to the Transportation 2035 Performance Objectives: See above.
- Projects compared directly and quantitatively: The evaluation captures a range of project types. Data was generated through the regional travel demand model for most projects. For the regional funding programs (e.g., Transportation for Livable Communities, Lifeline, Transit and Roadway Maintenance Shortfall programs), MTC developed methodologies based on recent research.
- Most cost-effective projects identified: The strength of this analysis lies in identifying the outliers (i.e. the highest and lowest project performers). It is not precise enough to distinguish among investments with very similar benefit-to-cost ratios.
- Focus performance evaluation on major investment decisions: While practical limitations preclude evaluation of each of the 400 to 600 discretionary investments expected in the Plan, major investment decisions can be informed through evaluation of a subset of projects as described below. Some smaller projects were not quantitatively evaluated, but were reviewed in the policy assessment.

Projects Subject to Analysis

1. Committed projects, as defined by the Planning Committee in January 2008, were not evaluated quantitatively or qualitatively.
2. Regional funding programs (beyond committed baseline programs) (e.g., TLC, Regional Bike and Pedestrian Program, Lifeline, Climate Change) were evaluated quantitatively.
3. MTC staff selected approximately 60 transit and roadway projects with total cost of $50 million (2007$) or greater and/or with area-wide impacts. Examples include:
    - New/enhanced transit service, including transit priority measures (if reasonable expectation of operating funding)
    - Freeway-to-freeway interchanges
    - Freeway widenings, including HOV lanes & slow-vehicle lanes
    - HOT lanes corridors (bundled by county/region and with express bus)
    - State highway widenings and major arterial connectors/reliever route improvements
4. Due to limitations of resources and analysis tools, some transit and roadway improvements costing more than $50 million were not evaluated quantitatively. Examples include:
    - Arterial or intersection improvements, except as noted above
    - Local interchanges
    - Individual, new transit stations/stops for existing services, transit center improvements & parking expansion
    - Grade separations
    - Programmatic categories (e.g., countywide bike and pedestrian projects, non-capacity enhancing arterial improvements)

Attachment B: Quantitative Project Evaluation Measures

Transportation 2035 Performance Objectives	Project Performance Measures
Reduce • Delay • Emissions • Fatalities and Injuries	**Combined benefit-cost** Benefit equals value in dollars of reductions in: • Delay • Particulate matter emissions • Carbon dioxide emissions • Fatalities and injuries
Reduce VMT	**Cost per vehicle mile traveled (VMT) reduced**
Improve Affordability	**Cost per low-income household served (trial measure)**
Improve Maintenance	**Benefit-cost measure for maintenance** Benefit equals direct public and private cost savings from performing maintenance on-time